IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 14-17 and 23 in accordance with the following:

1. (original) A file replication system having a plurality of nodes connected to a network, shared files being distributed to the nodes, wherein

a first node of the nodes comprises:

a first token managing portion asking a second node of the nodes for an access permission for a shared file when an access request takes place in the first node, and

an IO request intercepting portion accepting an access to a shared file, the access taking place in the first node itself, asking said first token managing portion to acquire the access permission against the access request, and asking a node that has an update permission for the shared file to access to the shared file when said first token managing portion is not capable of acquiring the access permission, and

a second node comprises a second token managing portion notifying a node that requests an access permission for a shared file of a node that has an update permission for the shared file as a response message when another node has an update permission for the shared file.

2. (original) A node, connected to another node through a network, having a file shared with a node, comprising:

a token managing portion managing an access request for a shared file; and

an IO request intercepting portion asking said token managing portion to acquire access permission for the shared file against an access request to the shared file in a node itself,

wherein said token managing portion notifies said IO request intercepting portion of a node that has an update permission in response to the access request of said IO request intercepting portion, and said IO request intercepting portion asks said node that has the update permission to access the shared file when said IO request intercepting portion is not capable of acquiring the access permission.

3. (original) The node according to claim 2, further comprising:

a system structure managing portion performing a restoration process of data of a shared file of the node itself when it is newly joined to a system,

wherein while said system structure managing portion is restoring the shared file, when an access request for the shared file takes place in the node itself, said IO request intercepting portion asks another node that shares the shared file to access the shared file.

4. (original) The node according to claim 2, further comprising:

a changed data notifying portion propagating an updated content of the shared file to other node along with information that represents a dependent relationship with another update; and

a received data processing portion reflecting the updated content to the shared file while assuring an order of the update based on the dependency relationship.

5. (original) The node according to claim 4, further comprising:

a system state information portion storing information about propagation mode of an updated content for each of at least one shared file,

wherein said changed data notifying portion propagates the update content based on information queued in said system information portion.

6. (original) The node according to claim 5, wherein the propagation mode is one of a synchronous mode in which it is assured that the updated content is propagated to all the nodes that share the shared file, a semi-synchronous mode in which it is assured that the updated content is propagated to the majority of nodes that share the shared file, and an asynchronous mode in which it is not acknowledged that the updated content is propagated to the nodes that share the shared file.

7. (original) The node according to claim 4, wherein said system state information storing portion keeps information about each node that shares at least one shared file for each shared file.

8. (original) A node, connected to another node through a network, having a file shared with a node, comprising:

a token managing portion asking another node to acquire an access permission for a shared file against an access request for the shared file in the node itself; and

an IO request intercepting portion accepting an access request for a shared file in the node itself, asking said token managing portion to acquire the access permission for the shared file against the access request, and asking a node that has an update permission for the shared file to access the shared file according to the access request when said token managing portion is not capable of acquiring the access permission for the shared file.

9. (original) A node, connected to another node through a network, having a file shared with a node, comprising:

a permission request accepting portion accepting an access permission request of another node for a shared file; and

a token managing portion notifying first node that has issued the access permission request for a shared file of second node ,when the second node has an update permission for the shared file.

10 (original) A file replication system having a plurality of nodes connected to a network, shared files being distributed to the nodes, wherein

a first node of the nodes comprises:

first token managing means for asking a second node of the nodes for an access permission for a shared file when an access request takes place in the first node, and

IO request intercepting means for accepting an access to a shared file, the access taking place in the first node itself, asking said first token managing means to acquire the access permission against the access request, and asking a node that has an update permission for the shared file to access to the shared file when said first token managing means is not capable of acquiring the access permission, and

a second node comprises: second token managing means for notifying a node that requests an access permission for a shared file of a node that has an update permission for the shared file as a response message when another node has an update permission for the shared file.

11. (original) A node, connected to another node through a network, having a file shared with a node, comprising:

token managing means for managing an access request for a shared file; and

IO request intercepting means for asking said token managing means to acquire an access permission for the shared file in response to an access request to the shared file in the node itself,

wherein said token managing means notifies said IO request intercepting means of a node that has an update permission in response to the access request of said IO request intercepting means, and said IO request intercepting means asks the node that has the update permission to access the shared file when said IO request intercepting means is not capable of acquiring the access permission.

12. (original) A node, connected to another node through a network, having a file shared with the node, comprising:

token managing means for asking another node to acquire an access permission for a shared file against an access request for the shared file in the node itself; and

IO request intercepting means for accepting an access request for a shared file in the node itself, asking said token managing means to acquire the access permission for the shared file against the access request, and asking a node that has an update permission for the shared file to access the shared file according to the access request when said token managing means is not capable of acquiring the access permission for the shared file.

13. (original) A node, connected to another node through a network, having a file shared with a node, comprising:

permission request accepting means for accepting an access permission request of another node for a shared file; and

token managing means for notifying first node that has issued the access permission request for a shared file of second node ,when the second node has an update permission for the shared file.

14. (currently amended) A file replication control method for a system having a plurality of nodes connected to a network, each node sharing a file, comprising:

causing an access requesting node to access a shared file of the access requesting node itself when the access requesting node has the latest data of a shared file; and

asking another node to access the shared file when ~~said another~~ the other node has the latest data.

15. (currently amended) The file replication control method according to claim 14, wherein ~~said another node that has the~~ an update permission ~~releases~~ for the shared file is given to only one node, and when the access requesting node accesses the shared file and another node has the update permission ~~after an updated content that has a dependent relationship with an update performed at said another node itself, has been propagated to all the nodes~~, the access requesting node asks the other node that has the update permission to access the shared file.

16. (currently amended) The file replication control method according to claim 15, wherein ~~said another~~ the other node that has the update permission ~~to release~~ releases the update permission after an update that has a dependent relationship with the update performed at ~~said another~~ the other node ~~itself,~~ has been propagated to all the nodes.

17. (currently amended) The file replication control method according to claim ~~14~~ 15, wherein said method further comprises:

~~another~~ the other node that has updated the shared file ~~to~~ asynchronously ~~propagate~~ propagating an updated content to the other nodes; and

causing the other node that has updated the shared file to process an access request that takes place in ~~another~~ the access requesting node while the updated content is being propagated.

18. (original) The file replication control method according to claim 17, wherein the updated content is reflected in such a manner that order thereof is assured.

19. (original) The file replication control method according to claim 18, wherein a dependency information that represents order of other updates to be propagated to the other node along with the updated content.

20. (original) The file replication control method according to claim 19, wherein a node that has received the updated content to reflect the updated content on a shared file of the node itself after receiving a previous updated content based on the dependency information.

21. (original) The file replication control method according to claim 14, wherein a propagation mode of an updated content is designated for each of at least one shared file.

22. (original) The file replication control method according to claim 14, wherein a node to which an updated content is propagated is designated for each of at least one shared file.

23. (currently amended) The file replication control method according to claim 14, further ~~wherein~~ comprising:

restoring data of a shared file of a newly joined node; and

operating a user program before data of the shared file is completely restored.

~~a node performs a restoring process that restores data of a shared file belong to the node itself when the node is newly joined to a system, and operating a user program before the data of the shared file is completely restored.~~

24. (original) The file replication control method according to claim 23, wherein restored data is transmitted in such a manner that order of update requests for the shared file is assured.

25. (original) The file replication control method according to claim 23, wherein the node asks another node that shares the shared file to perform a process for an access request for the shared file when the access request takes place in the node itself before data is completely restored.

26. (original) The file replication control method according to claim 14, wherein a node that has performed a systematic stop in which nodes that share a file are synchronously stopped to store a systematic stop state and the node synchronously resumes a process for the shared file without restoring data of the shared file.

27. (original) A file replication method for a system having a plurality of nodes connected to a network, comprising:

causing a first node to request a token for accessing a file;

notifying the first node of a second node that has the token when the first node is not capable of acquiring the token; and

causing the first node to ask the second node to access the file when the first node is notified that the first node is not capable of acquiring the token.

28. (original) A computer-readable portable storage medium, when being used by a computer that composes a node connected to other node through a network, on which is recorded a program for causing the computer to execute a process, said process comprising:

when the node accesses a shared file and a node itself has the latest data of the shared file, causing the node itself to access the shared file of the node itself; and

when another node has the latest data, causing the node itself to ask the node to access the shared file.

29. (original) A computer-readable storage medium for storing a program that causes a computer that composes a node connected to another node through a network to perform the steps of:

when a node issues an access request for a file shared with other node, judging whether or not a specific node has update permission for the shared file; and

when the specific node has update permission, notifying the requesting node of the specific node that has the update permission.